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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/864,870	05/25/2001	Simon Paul Davis	3036/49955	2274

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CROWELL & MORING LLP
INTELLECTUAL PROPERTY GROUP
P.O. BOX 14300
WASHINGTON, DC 20044-4300

EXAMINER	
NGUYEN, VAN KIM T	
ART UNIT	**PAPER NUMBER**
2151	

DATE MAILED: 02/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/864,870	DAVIS ET AL	
	Examiner	Art Unit	
	Van Kim T. Nguyen	2151	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 December 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,6-9 and 11-14* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *9 and 11-14* is/are allowed.

6)☒ Claim(s) *1 and 6-8* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This Office Action is responsive to communications filed on December 27, 2005.

- Claims 1, 6-9, 11 and added new claims 12-14 are pending in the case.

Claim Rejections - 35 USC § 103

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 1 and 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hughes et al (US 6,747,971), in view of Joo et al (US 5,963,552).

Regarding claim 1, as shown in Figures 1-10, Hughes discloses a method of operating a packet switch (200) comprising a plurality of ingress means (304a-n), a plurality of egress means (306a-n), a cross-bar (305) and a controller (314), the cross-bar being connected between the ingress means and the egress means to transfer multicast (312a-n) and unicast (313) data traffic from the ingress means to the egress means; the method comprising the steps of:

a) determining if the data traffic to be transferred is unicast or multicast (col. 6: lines 27-30, and col. 9: lines 7-17);

b) if the data traffic is unicast, invoking a unicast schedule (col. 9: lines 33-47);

c) if the traffic is multicast, invoking a multicast schedule (col. 9: lines 48-63); and

d) transferring the data traffic in accordance with the invoked schedule (cols. 2-17).

Hughes also discloses determining a priority for each ingress means for sending the cells (col. 12: lines 41-43; and col. 17: lines 56 – col. 18: line 2).

Hughes also discloses the priority for each ingress means is based on a comparison of a relative number of sets of adjacent send opportunities, as well as size of the sets (comparing the relative number of multicast queue 513 and unicast queues 512a, b, l, and n sequentially, as well as the size of the queues; col. 9: line 35 – col. 11: line 59; col. 14: lines 47-53; and col. 18: lines 32-39).

Hughes discloses substantially all the claimed limitations, but does not explicitly call for step c) to further comprise forming a multicast cell fanout table containing current fanout requirements for a cell at the head of a multicast queue in each ingress means.

As shown in Figures 1-8, Joo teaches forming a multicast cell fanout table (22) containing current fanout requirements (MCN and VPI/VCI information) for a cell (col. 3: line 66- col. 4: line 6; and col. 4: lines 38-41).

Joo also discloses setting eligible bits ("1") for multicast cells which are currently allowed to be scheduled (Joo: col. 5: lines 20-25).

As multicasting provides an efficient way to transmit information from point-to-multipoints, it would have been obvious to one of ordinary skill in the art at the time the invention was made necessary transmitting information for a cell contained in the multicasting routing table can be used in Hughes' crosspoint switch scheduler, motivated by the need to conserve bandwidth and improve efficiency of the communications system.

Claim Rejections - 35 USC § 103

4. Regarding claims 6-7, the combination of Hughes and Joo also discloses the step of e) filling a multicast schedule in accordance with full fanout of the first priority assigned to each ingress means (Hughes: col. 17: lines 12-29; and col. 17: line 51 – col. 18: line 55). Though the combination of Hughes and Joo does not explicitly specify a blank multicast schedule, but it is obvious the schedule must be blank before the filling since there would be no switch frame selection done yet.

Regarding claim 8, the combination of Hughes and Joo also discloses step e) further comprises the step of: (ii) filling in as much of the fanout of the next priority ingress means and subsequent ingress means as possible to complete the schedule (Hughes: col. 17: lines 30-39).

As multicasting provides an efficient way to transmit information from point-to-multipoints, it would have been obvious to one of ordinary skill in the art at the time the invention was made necessary transmitting information for a cell contained in the multicasting routing table can be used in Hughes' crosspoint switch scheduler, motivated by the need to conserve bandwidth and improve efficiency of the communications system.

Allowable Subject Matter

5. Claims 9 and 11-14 are allowed.

See Previous Office Action for Reason for Allowance.

Conclusion

6. Applicant's amendment necessitated the new ground of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Van Kim T. Nguyen whose telephone number is 571-272-3073. The examiner can normally be reached on 8:00 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Zarni Maung, can be reached on 571-272-3939. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Van Kim T. Nguyen
Examiner
Art Unit 2151

vkn

ZARNI MAUNG
SUPERVISORY PATENT EXAMINER